



Richard Therrien

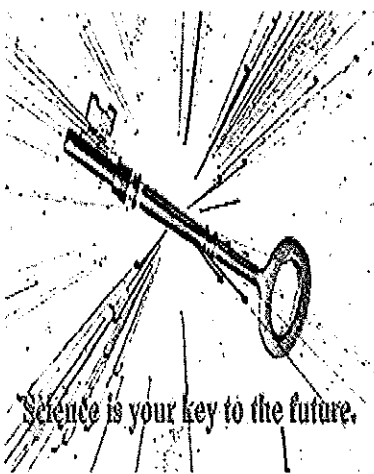
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New Haven Public Schools

TO: Education Committee
FROM: Richard Therrien, K-12 Science Supervisor
DATE: March 16, 2009
RE: Proposed changes to teacher certification

As K-12 Science Supervisor for New Haven, I support some provisions of SB 939, HB 6666, and HB 6654 and want to share additional concerns as they pertain to teaching certifications for science, a key shortage area.

The proposed changes are quite helpful. However, there is a problem with the current requirements for science subject areas. We believe a science major could teach a range of science courses, and not just the area in science where the teacher has 30 credits. This is an important distinction at a time when we need teachers with strong teaching skills as well as an academic background and not solely the latter.

HB 6666, AAC Teacher Certification, and HB 6654, AA Establishing a Resident Teacher Certificate – Subject Area Credits, Shortage Areas

Section 1 of HB 6666 is new language addressing shortage areas and certification. There are no credit requirements in a subject area, just achievement of an excellent score to be spelled out in regulations. This should work well in most shortage areas. I am concerned about its impact on science, where I believe some subject area education is important, though it need not be as high as the credits currently required by the State. I propose amending Section 1 of the bill to read as follows:

“On and after July 1, 2009, the State Board of Education shall allow an applicant for certification to teach in a subject shortage area pursuant to section 10-8b of the general statutes, or a certified employee seeking to teach in such a subject shortage area to substitute a minimum of 12 credits in the subject or related areas concerning science and achievement of an excellent score, as specified by the Commissioner of Education in regulations adopted pursuant to section 10-145d of the general statutes, as amended by this act, for the subject area requirements for certification under chapter 166 of the general statutes.”

If needed, I would support placing the same limits as currently exist for the shortage area permit and the temporary minor authorization permit, i.e., “that the applicant have a minimum of 12 credits in the content area, and that the area be one designated as a “shortage area” by the Commissioner”. This can specifically be limited to science.

I would suggest that this should also apply to RHB 6654, which I strongly support so that the resident teachers meet the same standards (12 credits *AND* a sufficiently high score).

HB 6666, AAC Teacher Certification, and SB 939, AAC Educator Certification– Subject Area Credits, Science

I would recommend revising Section 4 of HB 6666, which mostly covers existing law on applicants for certification endorsement areas. Currently, the State Department of Education requires 30 credits in a subject area. This makes it exceedingly difficult to hire science teachers. My recommendation would revise this so that an applicant for a science endorsement must have a minimum of 18 credit hours in the specific subject, with a minimum of 30 credits total for science.

New Haven's District Improvement Plan focuses on teacher quality. Yet we find that in the area of science, we still have a need for certification regulations that allow us more flexibility, and the ability to hire teachers willing and able to teach all students. We do not have an issue with teachers' lack of subject knowledge, and we need to be able to hire bright, motivated, energetic teachers interested in the whole child.

I urge you to adopt legislation that allows the regulations to return to the spirit of the law "an applicant hold a bachelor's degree with a major either in or closely related to the certification endorsement area", especially in the case of science. Currently, there are five certification areas in science. To be certified in earth science, physics, chemistry, or biology, the state requires an applicant have 30 credits of courses in that one area. General Science requires 39 credits distributed among earth, biology, chemistry, and physics. A second endorsement requires 18 credits in that subject area. This is an increase from requirements that previously required 18 credits in the first science subject, and 12 in the second.

There is currently a dire shortage of certified qualified science teachers in Connecticut, particularly in the urban districts. Last summer I interviewed applicants for 32 positions, mostly in general science, and had only 40 certified applicants. Part of the reason is that our current five subjects of certification do not match the college majors, our curriculum, or the experience of the applicant pool. We have prospective science teachers who majored in Environmental Science, Engineering, or Biochemistry. They are unable to get certification depending on which of the four areas their courses are considered to be. We have prospective applicants who have worked for years in industries in labs, but can only be certified to teach Biology. Only one third of our curriculum is Biology, and our greatest need is for teachers in the physical sciences. We have a ninth grade course that exactly follows state standards that is an interesting mixture of environmental chemistry issues and physical science, yet we can't match our qualified applicants with the certifications needed. Additionally, our needs are for teachers who are willing and able to teach general science or many different science areas to 7th, 8th, and 9th graders. Many of our certified applicants have multiple science degrees, yet are unable or unwilling to teach anything but Honors level upperclassmen. The teachers we would like to hire, who can relate to students, and think of science in innovative, exciting ways, may not have 30 credits in one area in college to receive that initial certification, but can turn out to be great science teachers.

I can offer myself as an example. I was certified in 1988 in Earth Science, Math, Physics, and General Science. I was an Astronomy major at Case Western Reserve University, and have 21

credits in Astronomy, 18 credits in Physics, 18 credits in Math, 12 credits in Chemistry, and none in Biology. If we followed the regulations in place today, with my astronomy courses counting as earth science as they did in 1988, then I would be unable to be certified in any of the five science subject areas, and be unable to teach.

I have had 23 years experience as a science educator in Connecticut. I have served as President of CT Science Teachers, helped on many state committees and groups, taught science instruction in the PIMMS and ARC programs, and worked with the CT Academy. I very successfully taught nine years middle school physical science, and nine years high school physics, earth science, and math. By the way, although I was well qualified in Physics, I can share that I have never used any of the upper level physics courses in which I used three dimensional calculus and multi million dollar particle accelerators to help even my high school physics students. Many teachers and students have shared that my class inspired them to continue in science, or become teachers. If we want dedicated science educators to provide our students what they need for the future, we need to make sure that the regulations that we have in place help us give them the teachers they need.

SB 939, AAC Educator Certification-- Remaining Competitive

There is a provision in Sec. 4(c) of SB 939 that concerns existing law, in Section 10-145f(c)(3). It pertains to nonrenewable temporary certificates giving charter schools a special exemption for certification. If a person is hired by a charter school after July first in any school year for a teaching position that school year, provided the person hired after said date could reasonably be expected to complete the requirements prescribed in subparagraphs (B) and (C) of subdivision (1) of subsection (c) of section 10-145b, that person has the certificate for a year. In essence, this places the school district at a competitive disadvantage with the charter schools. We would hope that, once one bill emerges from the three drafts, that we all are on a level playing field so we can meet our goal of attracting and retaining qualified science teachers.

Thank you.

Richard Therrien